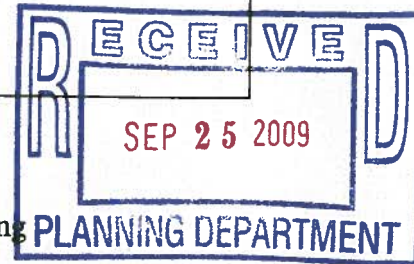


**DEPARTMENT OF BUILDING AND DEVELOPMENT**

**COUNTY OF LOUDOUN**

**MEMORANDUM**



DATE: September 23, 2009

TO: Mike Elabarger, Project Manager, Department of Planning

FROM: Todd Taylor, Environmental Engineer

THROUGH: Gary Clare, Chief Engineer *MC*  
William Marsh, Environmental Review Team Leader *W*

CC: Val Thomas, Zoning Planner  
Kelly Williams, Community Planning, Department of Planning

SUBJECT: **ZCPA-2009-0007 & ZMOD-2009-0004**  
**Belmont Glen Village**

The Environmental Review Team (ERT) reviewed the subject application during the September 21, 2009, ERT Meeting. Our comments pertaining to the application are as follows:

*Regarding stream buffers*

1. Sheets 2, 3, and 6 identifies a "300' Goose Creek Scenic Easement". The legend on sheets 2 and 6 states that it "includes the greater and cumulative width of the 100' minimum protected stream corridor width, measured 100' from the Goose Creek 100-year floodplain and the 300-foot Scenic Goose Creek Buffer, per Section 4-2005 A and B of the Revised 1993 Loudoun County Zoning Ordinance (Revised 1993 LCZO)". Please note that the referenced section is no longer part of the Revised 1993 LCZO. However, the buffers remain applicable through Facilities Standards Manual (FSM) requirements and Revised General Plan (RGP) policies. Staff recommends replacing the source information in the legend with the following:
  - 300-foot Reservoir Protection Buffer per FSM Section 5.320.D.7.a and RGP Surface Water Policy 10
  - River and Stream Corridor 50-foot Management Buffer surrounding the floodplain and adjacent steep slopes (slopes 25 percent or greater, starting within 50 feet of the floodplain and extending no farther than 100 feet beyond the floodplain) per RGP River and Stream Corridor Policy 2
2. For clarity, please identify the 300-foot Reservoir Protection Buffer and River and Stream Corridor 50-foot Management Buffer independently in plan view. [FSM

Section 5.320.D.7.a, RGP Surface Water Policy 10, and RGP River and Stream Corridor Policy 2]

3. To minimize impacts to the riparian corridor, staff recommends removing lots 170 and 171 from the River and Stream Corridor 50-foot Management Buffer. The encroachment would result in impacts to existing forest cover and steep slopes adjacent to a jurisdictional stream. As stated on Page 5-32 of the RGP, "riparian forests along streams provide the greatest single protection of water quality by filtering pollutants from stormwater runoff, decreasing stream bank erosion, and maintaining the physical, chemical, and biological condition of the stream environment".

*Regarding steep slopes*

4. Please add a note to Sheet 1 indicating the basis for the steep slope designations (i.e. Steep Slopes are derived from 2-foot topography). [Revised 1993 LCZO Sections 5-1508 and 6-407]
5. Staff notes that the steep slope limits provided on the rezoning plan set differ from the steep slope limits provided on preliminary subdivision SBPL-2004-0026. Please clarify. [Revised 1993 LCZO Sections 5-1508 and 6-407]
6. Please add moderately steep slopes to Sheet 6. [ZCPA Checklist Item J.2]
7. To demonstrate compliance with the Steep Slope Standards in Section 5-1508 of the Revised 1993 LCZO, staff recommends providing a steep slope exhibit on a separate plan sheet at a 1 inch equals 100 feet scale. The exhibit should include very steep slopes (greater than 25 percent), moderately steep slopes (15 to 25 percent), topography, jurisdictional wetlands and streams, drains, forest cover limits, and the development layout, including roads, lots, stormwater management (SWM)/best management practice (BMP) facilities, and utilities. [ZCPA Checklist Item J.2]
8. The road providing access to lots 19-39 crosses a small area of very steep slopes. The crossing was approved as part of SBPL-2004-0026 based on an agreement to use a con-span crossing. A letter dated January 27, 2006, from J. Randall Minchew with Walsh, Colucci, Lubeley, Emruch, & Terpak, P.C., was submitted to the County describing the crossing. In addition, the approved preliminary subdivision plan clearly depicted the con-span crossing and associated abutments. Staff recommends that the con-span crossing and abutments be clearly depicted on the rezoning plan set, including the steep slope exhibit described above. The abutments should be clearly outside of the very steep slope area. As an alternative that better protects the steep slopes along this drainage corridor and avoids higher costs associated with bridge construction, staff recommends that the applicant fully explore accessing the lots via an inter-parcel connection with the property to the east.

9. Land disturbance associated with residential lots is not a permitted use on very steep slopes, per Section 5-1508(D)(1)(c) of the Revised 1993 LCZO. Revise lots to completely avoid very steep slopes or depict potential house, driveway, and limits of clearing and grading on those lots with very steep slopes to demonstrate that there is sufficient buildable area.
10. Very steep slopes are depicted on lots 170 and 173. According to SBPL-2004-0026, the steep slopes are associated with an old road bed. If that is accurate, please label the very steep slopes as "man-made - associated with an old road bed" on the rezoning plan set, including the steep slope exhibit described above. Staff plans to conduct a site visit to confirm the conditions.

*Regarding water quality*

11. The subject property is located in the Goose Creek Reservoir Protection Area and is subject to the standards in FSM Section 5.320.D.7.b, including a reduction in pollutant load consistent with an average land cover condition of 10 percent impervious cover. Please provide a note on the plat referring to the standards outlined in FSM 5.320.D.7.b.
12. FSM Section 5.320.D.7.b.iv requires all storm drainage inlet structures to be marked to indicate that they drain to a drinking water supply and that no dumping into such inlet structures is permitted. Please update existing Proffer 22 to be consistent with the FSM requirement.
13. While seven "Low-Impact BMPs" were shown on the plan set associated with rezoning ZMAP-2004-0006, only one stormwater management (SWM) pond is depicted on the current rezoning plan set. In addition, existing Proffer 29 indicates that the owner will conform with the standards and procedures outlined in the "Preliminary Recommendations for Belmont Glen/Rouse Property", prepared by Loudoun County Sanitation Authority, which recommends the use of low impact development and, specifically, bioretention on the property. Consistent with this commitment, the previously approved preliminary subdivision and construction plans and profiles incorporated low impact development facilities within the project. Staff recommends that a consistent SWM/BMP approach be provided with the current rezoning application. Providing additional low impact development facilities up in the site may also help to meet the FSM Reservoir Protection Requirements.
14. Existing Proffer 19 states that the applicant shall re-stabilize any areas within the 300-foot scenic easement that show erosion impacts and that are degraded. The proffer goes on to state that re-stabilization techniques may include replanting and the use of erosion control devices. At the time of the preliminary subdivision review, staff found that the intent of this section of the proffer was unclear and difficult to achieve due to existing tree cover in areas that show erosion impacts as well as Corps and DEQ requirements. Maintaining the overall intent to protect water quality, staff

recommends replacing the re-stabilization commitment with reforestation open areas within the 300-foot buffer.

*Other*

15. Staff recommends adjusting the proposed layout to maximize protection of jurisdictional wetlands and streams, particularly the south-central wetland system, consistent with Revised General Plan (RGP) River and Stream Corridor Policy 11. Staff also emphasizes the importance of mitigating wetland and stream impacts close to the impact area to help maintain water quality and flood protection functions, as well as habitat. As such, for any necessary mitigation, staff recommends that the applicant commit to prioritizing mitigation as follows: 1) onsite, 2) within the Goose Creek Watershed within the same Planning Policy Area, 3) within the Goose Creek Watershed outside the Planning Policy Area, and 4) Loudoun County, subject to approval by the Corps and the Virginia Department of Environmental Quality (DEQ). This approach is consistent with Policy 23 on Page 5-11 of the RGP which states that "the County will support the federal goal of no net loss to wetlands in the County." Furthermore, the County's strategy is to protect its existing green infrastructure elements and to recapture elements where possible [RGP, Page 6-8, Green Infrastructure Text].
16. Staff encourages implementation of green building standards within this application. Guiding Principle Policy 12 of CPAM-2007-0001 states that "The County encourages development that utilizes energy efficient design and construction principles, promotes high performance and sustainable buildings, and minimizes construction waste and other negative environmental impacts." Accordingly, staff recommends a green building commitment with this application that takes advantage of available third party standards for homes, including Passive House, National Association of Home Building standards, EarthCraft Virginia, or Leadership in Energy and Environmental Design. At a minimum, staff recommends a commitment to Energy Star certification for all homes; construction waste management that diverts at least 50 percent (by weight) of construction, demolition, and landclearing (CDL) waste from landfills; installation of Energy Star and/or Water Sense appliances and fixtures in all homes; and an education program about these features for homeowners that includes an owner's manual and new resident orientation. Note that Energy Star Certification for homes can lead to more desirable home mortgages pursued by future buyers, which is consistent with the advantages of the revised concept plan listed in the statement of justification, "greener community" and "more-cost efficient home".
17. Staff recommends that the applicant coordinate with the City of Fairfax regarding the established Emergency Action Plan for the Beaverdam Reservoir to identify whether or not the proposed lots fall within the predicted breach flood zone and if they should be added into the Emergency Action Plan.

Please contact me if you need any additional information.